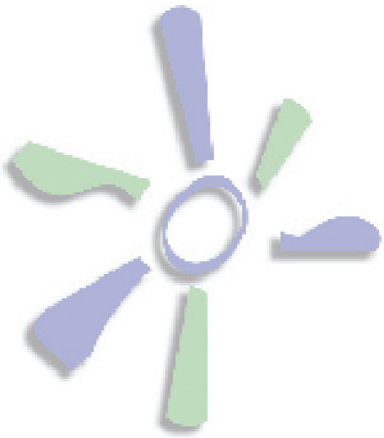


Asthma Hospitalization Report, 2005

Acknowledgements

The following persons contributed to the production of this report.

Bureau of Health Promotion

LaDene Larsen, BNS, Director

Michael Friedrichs, MS, Bureau Epidemiologist

Rebecca Giles, MPH, Asthma Program Manager

Kristina Marsh, MPH, Health Program Specialist

Amy Bowler, BA, Information Analyst

Additional Copies

For additional copies or for data found in this report, please contact Jess Agraz at jagraz@utah.gov or visit the Asthma Program Webpage at www.health.utah.gov/asthma.

Suggested Citation

Utah Asthma Program, Bureau of Health Promotion, *Asthma Hospitalization Report, 2005*, Salt Lake City, UT: Utah Department of Health 2005.

Report Prepared By

Jess Agraz, MPH, Epidemiologist

This project was funded by the Cooperative Agreement number: U59/CCU824176-01 from the Centers for Disease Control and Prevention. The contents of this report are solely the responsibilty of the authors and do not necessarily represent the official view of the Centers for Disease Control and Prevention.

Purpose

This report is a descriptive analysis of hospitalizations due to asthma for 2003 in Utah. This report focuses on inpatient hospitalizations that resulted in a discharge and, as a result, does not include emergency room visits due to asthma.

Data on hospitalizations were obtained from the Hospital Discharge Database housed at the Utah Department of Health (UDOH). The database consists of the following:

- hospital discharges by count
- crude and age-adjusted rates
- costs associated with the diagnosis of asthma (ICD-9 code 493)
- length of stay

Background

Asthma is a serious personal and public health issue that has far reaching medical, economic and psychosocial implications. The burden of asthma can be seen in a number of asthma-related events, including hospitalizations. According to the National Asthma Education and Prevention Program, asthma is considered to be an ambulatory care-sensitive condition, because with consistent and effective outpatient care, a large portion of hospitalizations are preventable.[1] Data on hospitalizations for asthma can be used to examine the severity of asthma, both from the perspective of the individual and of society.

It is important to note that asthma hospitalization rates measure a severe and relatively infrequent outcome of the disease. They are not useful indicators of asthma prevalence in the population. However, hospitalization rates are good for identifying populations that may be at greater risk of significant morbidity and mortality due to asthma.

Source

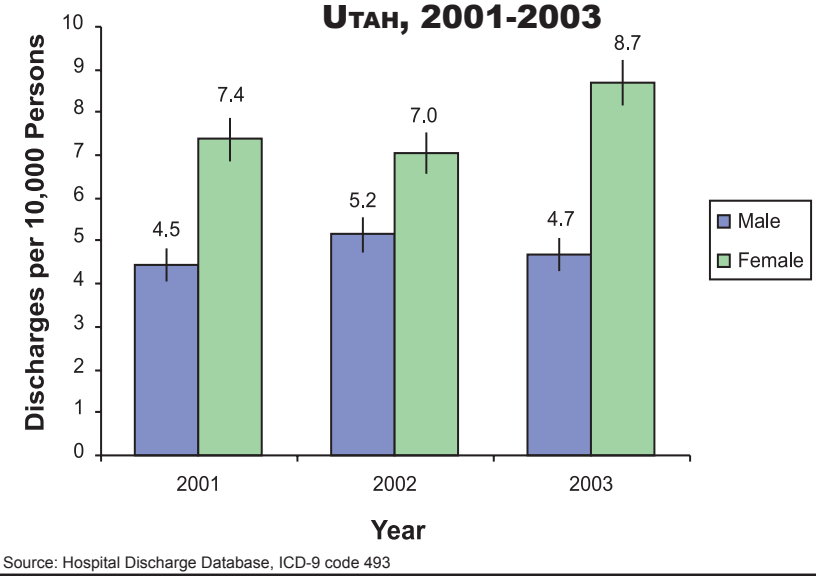
1. National Heart, Lung and Blood Institute, National Asthma Education and Prevention Program Description. Available at http://www.nhlbi.nih.gov/about/naepp/naep_pd.htm

Findings

Gender Differences

Between 2001 and 2003 there were 4,349 hospitalizations due to asthma, with an average of 1,450 hospitalizations each year.

Figure 1 **Asthma Hospitalizations by Year and Sex Utah, 2001-2003**



Source: Hospital Discharge Database, ICD-9 code 493

Figure 1 compares the age-adjusted hospitalization rates of males and females in the years 2001, 2002, 2003.

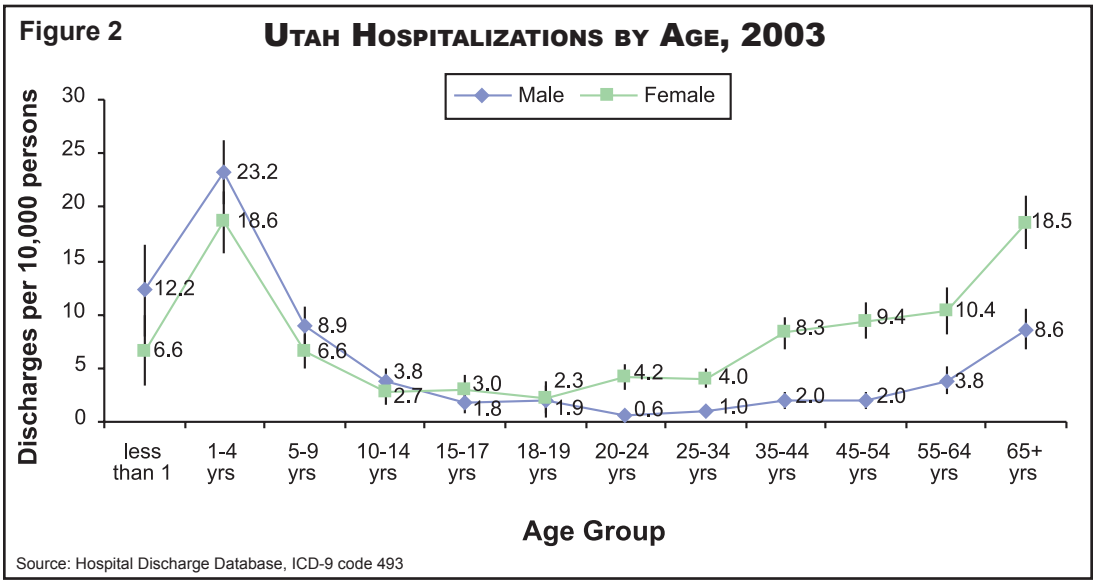
Females experience a higher rate of hospitalization due to asthma when compared to males in Utah as well as nationally. In 2003 the age-adjusted rate for females was 8.7 per 10,000 vs. 4.7 per 10,000 for males. This pattern of gender difference in asthma hospitalizations has been consistent over time; female rates exceeded male rates each year from 2001–2003.

Age Differences

Age-specific rates of hospitalization for asthma in Utah are highest among children aged 0 to 9 and adults aged 65+. Male children age 1-4 experience the highest rate of hospitalization due to asthma of any age and gender group.

However, around age 20 with the shift to adulthood this trend is reversed and females begin to experience higher rates of hospitalization due to asthma. The high rates among adults ages 65+ may be that older adults are more likely to have other diseases such as chronic obstructive pulmonary disease (COPD) that may be incorrectly classified as asthma.[2]

Figure 2



Source: Hospital Discharge Database, ICD-9 code 493

Figure 2 indicates the rates of hospitalizations for 2003 based on different age groups.

COSTS DUE TO HOSPITALIZATION

Charges for inpatient hospital services represent just one component of direct medical expenditures for asthma. The costs associated with hospitalization for asthma are significantly higher than care received in an outpatient setting. As a result, hospitalizations typically constitute a sizable portion of total direct costs.

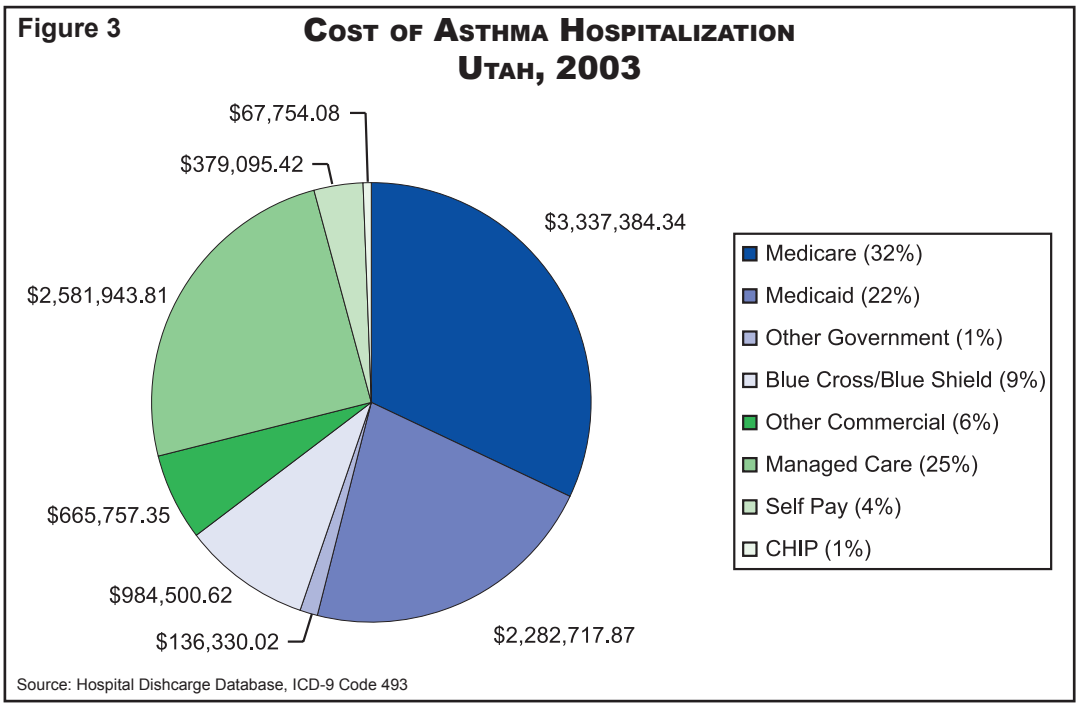
In 2003 there were 1,577 hospitalizations due to asthma, resulting in 4,712 hospital days and total charges of almost $10.5 million. The mean length of stay for hospitalization due to asthma was 3.0 days with an average charge of $6,698.

Source:
2. *Archives of Internal Medicine*, American Medical Association, v. 162, May 27, 2002 p. 1127. Available at http://www.biostat.jhsph.edu/~fdominic/ioi10221.pdf

A primary payor is the principal source from which a hospital expects to receive payment for services rendered. The information on primary payors for Utah hospitalization is divided into 10 categories. This analysis will focus on the following 8 categories: Medicare; Medicaid; Other government, Blue Cross/Blue Shield; Other Commercial; Managed Care; Self Pay; and Children's Health Insurance Program (CHIP).

Figure 3

COST OF ASTHMA HOSPITALIZATION
UTAH, 2003



Source: Hospital Dishcarge Database, ICD-9 Code 493

Figure 3 indicates the cost distibution of various payors.

Total government expenditure in 2003 accounted for 55% of dollars spent on hospitalization for asthma.

- Medicare 32%
- Medicaid 22%
- CHIP 1%
- Other government 1%
- Managed care 25%
- Blue Cross/Blue Shield 9%
- Other commercial 6%
- Self pay 4%

Conclusion

Asthma is a serious chronic disease that affects thousands of Utahns. Fortunately many hospitalizations due to asthma are preventable through proper asthma management techniques and education. Effective management includes control of exposure to factors that trigger severe episodes, adequate medication management, continual monitoring of the disease, and patient education in asthma care.

Asthma can usually be managed in an outpatient setting, thereby reducing the need for inpatient hospitalization. Tracking rates of hospitalization can aid in identifying populations or areas with inadequate access to routine medical care.

The rate of hospitalizations for asthma has remained fairly constant between 2001-2003. As this report highlights females, along with persons aged 0-9 and 65+ are at the greatest risk of being hospitalized due to asthma. Males experience a greater rate of hospitalization due to asthma at younger ages (0-9). As age increases females begin to experience higher rates of hospitalization due to asthma.

Costs associated with hospitalization due to asthma are substantially higher than care received in an outpatient setting. While direct costs were mentioned, indirect costs due to asthma hospitalization also have an economic impact by way of lost days of work and school.

Utah Asthma Hospitalization Report, 2005

Utah Asthma Task Force

Utah Department of Health
Asthma Program
PO Box 142106
Salt Lake City, UT 84116-6141
(801) 538-6141

UTAH DEPARTMENT OF HEALTH
Asthma Program

Promote Prevent Protect
Utah Department of Health